

Regulation Requirements:

- All public water systems are required to monitor the performance of the disinfection facilities to ensure that appropriate disinfectant levels are maintained. All compliance monitoring must be conducted at sites designated in the public water system's monitoring plan.
- All systems must monitor the disinfectant residual in the distribution system and **must monitor the residual at the time and site a bacteriological sample is collected**. The free chlorine or chloramine residual must be measured to a minimum accuracy of plus or minus 0.1 milligrams per liter (mg/L). **A color comparator (also known as a color wheel) may be used for distribution samples only.**
 - When used, a color comparator must have current reagents, an unfaded and clear color comparison display, a sample cell that is not discolored or stained, and must be properly stored in a cool, dark location where it is not subjected to conditions that would result in staining. The color comparator must be used in the correct range. If a sample reads at the top of the range, the sample must be diluted with chlorine-free water, then a reading taken, and the resulting residual calculated.
- Chlorine residual analyzers and reagents are available through many companies. Your consultant or engineering firm may be able to provide recommendations on brands. TCEQ is available to verify your chosen chlorine residual analyzer meets the requirements of TCEQ rules and regulations prior to purchase.

Reporting Information:

[From the EPA-approved TCEQ Public Water System Supervision Program Quality Assurance Project Plan, Guidance for Analysis and Reporting Under the Revised Total Coliform Rule, Addendum #4 (Revision 1)]

Sample Collection Procedures

At a minimum, sampling personnel must measure and record the chlorine residual on the Microbial Reporting Form (MRF) in the field at each sample site. Samples must also be collected at locations specified within the PWS' Sample Siting Plan. PWSs should maintain and adhere to a written Sample Collection Procedure or SOP.

No Chlorine Residual (On MRF)

The laboratory must confirm that a field measured chlorine residual is documented on the MRF or COC in all cases, except for construction and special purpose samples, prior to arrival at the laboratory. In order to help the PWS avoid violations, the laboratories must reject compliance samples (i.e., routine {distribution}, repeat, and raw well) without a documented field measured chlorine residual recorded on the MRF. Since this is a field measurement taken at the time of sample collection, this is not an item that can be recorded in the laboratory, if missing.

